1870MNRAS..30..180W

At Reapp.	Dark limb	h	m	s
Ball bisected	.. ..	16	5	2
Ring clear of Moon	..		5	52

Of these occultations the two first have been subjected to calculation. That of *Aldebaran* accords with the longitude within a very few seconds. In the case of *m Tauri* the discordance is greater (viz. about 13^s), but the occultation was far from a central one. The Moon seems to have been behind, or above, or both, as repects her tabular place.

Several Sun-spots have been noticed exhibiting a remarkable appearance when near the limb, especially on March 25 and April 25, a sketch of the latter is submitted.

If the Sun-spots are cuplike or conical depressions and symmetrically placed, or nearly so, with respect to a normal or solar plumbline, the breadth of the nearer margin would invariably be less than that of the further margin when near the limb, and would even disappear on approaching it (which is the general phenomenon). That, of which the sketch is submitted, on April 25, was about 25° from the limb, and exhibited its nearer margin equal in breadth to the further one. By the imaginary section through the photosphere it is shown how very oblique must have been the axis of the cavity around the spot on the hypothesis of its cuplike shape.

Colebyfield, Wimbledon.

Note respecting η Argûs. By H. A. Severn, Esq.

(*Extract of Letter addressed to the Astronomer Royal by Henry A. Severn, Union Bank of Australia, Melbourne, Victoria, received April* 1870.)

"I may say that I cannot confirm the new position given to *η Argûs* in respect to the Nebula. I have watched it for 14 years, and it is just where it was; of course much less brilliant."

Instruments, 13 in. front view reflector, of his own construction, and a 3¾ in. refractor.

Comparisons of the Places of certain Stars, as given in the Second Radcliffe Catalogue, with the Places given by Dr. Wolfers in the Tabulæ Reductionum. By Dr. Wolfers. Translation.

Extract of a Letter from Dr. Wolfers to the Radcliffe Observer.

"I beg to offer my best thanks for the copy which I have received of the Second Radcliffe Catalogue of Stars, presented to me by the Radcliffe Trustees.

1870MNRAS..30..180W

"You will not be surprised that I have, as on former occasions, compared the mean places of the stars therein contained with the places determined by me, since the latter are now in use at several observatories. The agreement is, as in all former comparisons, in general very satisfactory, as you will see by the accompanying copy. I must leave it to your own judgment to determine whether it is proper to communicate the paper to the Royal Astronomical Society. It will be a satisfaction to me if, by this means, the use of the *Tabulæ Reductionum* should be extended.

Comparison of Fundamental Stars (Tab. Red. = W.) *with the Second Radcliffe Catalogue* (M.)

Name.	No. of Obs.	R.A.					No. of Obs.	Declination.				
		M.			W.	M.—W.		M.			W.	M.—W.
		h	m	s	s			°	′	″	″	″
α Andromedæ	12	0	1	9·38	9·43	−0·05	7	+28	19	3·7	3·3	+0·4
γ Pegasi	21	0	6	1·77	1·86	−0·09	6	+14	24	21·0	18·5	+2·5
α Cassiopeiæ	3	0	32	35·14	35·06	+0·08	6	+55	46	7·3	8·4	−1·1
α Arietis	14	1	59	17·25	17·32	−0·07	2	+22	47	56·4	55·2	+1·2
α Ceti	18	2	54	57·89	57·87	+0·02	4	+ 3	32	17·4	17·0	+0·4
α Persei	5	3	14	20·74	20·80	−0·06	4	+49	21	33·0	33·2	−0·2
α Tauri	19	4	27	53·43	53·46	−0·03	11	+16	13	28·4	28·4	0·0
α Aurigæ	10	5	6	21·06	21·17	−0·11	9	+45	51	2·8	3·4	−0·6
β Orionis	11	5	7	48·62	48·70	−0·08	9	− 8	21	59·2	59·5	+0·3
β Tauri	7	5	17	26·69	26·67	+0·02	7	+28	29	8·2	5·9	+2·3
α Orionis	13	5	47	35·58	35·64	−0·06	11	+ 7	22	38·8	38·2	+0·6
α Canis Maj.	10	6	38	58·63	58·70	−0·07	24	−16	31	36·6	36·2	−0·4
α Geminorum	13	7	25	39·52	39·45	+0·07	15	+32	11	30·5	29·4	+1·1
α Canis Min.	15	7	31	58·35	58·36	−0·01	12	+ 5	34	50·8	50·5	+0·3
β Geminorum	17	7	36	44·64	44·69	−0·05	11	+28	21	39·7	38·9	+0·8
α Hydræ	15	9	20	42·43	42·47	−0·04	8	− 8	3	15·0	12·9	−2·1
α Leonis	20	10	0	54·71	54·78	−0·07	16	+12	38	60·6	59·9	+0·7
α Ursæ Maj.	5	10	55	3·51	3·28	+0·23	16	+62	30	21·4	20·7	+0·7
β Leonis	15	11	41	54·98	55·00	−0·02	6	+15	21	16·1	16·8	−0·7
β Virginis	11	11	43	24·20	24·16	+0·04	5	+ 2	33	12·3	12·9	−0·6
γ Ursæ Maj.	6	11	46	27·25	27·08	+0·17	4	+54	28	22·8	23·2	−0·4
α Virginis	21	13	17	49·29	49·32	−0·03	18	−10	25	46·8	45·3	−1·5
η Ursæ Maj.	13	13	42	1·27	1·25	+0·02	7	+50	0	46·6	47·8	−1·2
α Boötis	11	14	9	16·55	16·62	−0·07	5	+19	54	47·2	47·5	−0·3
8 Libræ	1	14	42	56·89	56·92	−0·03	1	−15	24	47·1	44·9	−2·2
α Libræ	14	14	43	8·32	8·36	−0·04	3	−15	27	27·8	26·5	−1·3
β Ursæ Min.	1	14	51	8·89	9·23	−0·34	7	+74	43	38·8	38·3	+0·5
α Coronæ	14	15	28	45·67	45·71	−0·04	5	+27	11	17·5	18·2	−0·7
α Serpentis	15	15	37	22·43	22·48	−0·05	4	+ 6	52	7·0	8·1	−1·1
α Scorpii	18	16	20	49·70	49·73	−0·03	10	−26	7	2·9	2·4	−0·5
α Herculis	11	17	8	15·87	15·95	−0·08	2	+14	33	11·0	11·0	0·0
α Ophiuchi	26	17	28	26·13	26·23	−0·10	11	+12	39	54·6	54·8	−0·2

1870MNRAS..30..180W

Name.	No. of Obs.	R.A. M.	R.A. W.	R.A. M.—W.	No. of Obs.	Declination. M.	Declination. W.	Declination. M.—W.
		h m s	s			° ′ ″	″	″
γ Draconis	20	17 53 21·35	21·47	−0·12	6	+51 30 24·8	24·5	+0·3
α Lyræ	14	18 32 11·89	11·94	−0·05	14	+38 39 20·4	20·2	+0·2
γ Aquilæ	21	19 39 36·13	36·25	−0·12	9	+10 16 29·3	29·8	−0·5
α ,,	26	19 43 57·08	57·18	−0·10	15	+ 8 30 5·5	5·5	0·0
β ,,	20	19 48 26·19	26·21	−0·02	8	+ 6 3 34·9	35·6	−0·7
α¹ Capricorni	1	20 9 53·16	53·17	−0·01	4	−12 56 18·7	15·9	−2·8
α ,,	14	20 10 17·08	17·09	−0·01	7	−12 58 35·2	32·6	−2·6
α Cygni	26	20 36 39·47	39·59	−0·12	12	+44 46 52·7	54·2	−1·5
α Cephei	17	21 15 14·18	14·14	+0·04	20	+61 59 35·2	35·0	+0·2
α Aquarii	25	21 58 35·49	35·57	−0·08	6	− 0 59 55·1	54·0	−1·1
α Piscis Austr.	10	22 49 54·40	54·44	−0·04	11	−30 21 47·2	47·5	+0·3
α Pegasi	22	22 57 47·33	47·39	−0·06	9	+14 27 9·3	10·9	−1·6
α Ursæ Min.	14	1 8 2·37	2·65	−0·28	17	+88 33 46·9	47·1	−0·2
δ Ursæ Min.	4	18 17 30·60	30·16	+0·44	17	+86 36 7·4	6·2	+1·2

Comparison of Additional Stars (Astr. Jahrbuch, 1867, page 325, = (W)) *with the Second Radcliffe Catalogue* (M).

Name.	No. of Obs.	R.A. M.	R.A. W.	R.A. M.—W.	No. of Obs.	Declination. M.	Declination. W.	Declination. M.—W.
		h m s	s	s		° ′ ″	″	″
β Ceti	13	0 36 33·63	33·63	0·00	5	−18 45 21·9	21·3	−0·6
γ ,,	18	2 36 3·01	3·01	0·00	7	+ 2 38 37·8	37·1	+0·7
δ Arietis	17	3 3 37·74	37·82	−0·08	8	+19 11 40·3	40·1	+0·2
ι Ursæ Maj.	10	8 49 36·36	36·32	+0·04	9	+48 35 17·7	17·6	+0·1
θ ,,	4	9 23 28·32	28·28	+0·04	1	+52 18 48·4	46·3	+2·1
γ¹ Leonis	9	10 12 14·91	14·95	−0·04	4	+20 32 54·0	53·7	+0·3
χ ,,	13	10 57 47·60	47·70	−0·10	9	+ 8 5 30·7	30·9	−0·2
δ ,,	10	11 6 39·39	39·58	−0·19	8	+21 17 25·8	25·0	+0·8
δ Crateris	9	11 12 20·59	20·67	−0·08	7	−14 1 18·1	17·2	−0·9
γ Virginis med.	9	12 34 34·11	34·13	−0·02	4	− 0 40 53·3	51·0	−2·3
12² Canum Ven.	7	12 49 28·47	28·46	+0·01	3	+39 4 31·2	31·1	+0·1
ζ Virginis	11	13 27 33·58	33·82	−0·24	5	+ 0 7 14·9	17·9	−3·0
η Boötis	17	13 48 1·15	1·22	−0·07	6	+19 6 3·5	4·0	−0·5
ψ ,,	7	14 58 26·80	26·86	−0·06	4	+27 29 43·9	45·2	−1·3
ζ Ursæ Min.	2	15 49 8·72	8·53	+0·19	4	+78 13 27·5	24·0	+3·5
ζ Herculis	16	16 36 0·57	0·72	−0·15	7	+31 51 32·2	30·7	+1·5
κ Ophiuchi	17	16 51 2·53	2·56	−0·03	7	+ 9 35 44·0	45·3	−1·3
β Draconis	12	17 27 16·12	16·27	−0·15	15	+52 24 23·8	23·4	+0·4
μ Herculis	22	17 40 58·78	58·78	0·00	10	+27 48 18·9	19·9	−1·0
β¹ Lyræ	26	18 44 54·61	54·61	0·00	4	+33 12 9·6	9·0	+0·6
1 Aquilæ	27	19 18 26·30	26·34	−0·04	8	+ 2 50 19·8	19·9	−0·1
61¹ Cygni	18	21 0 37·43	37·39	+0·04	12	+38 3 47·8	47·3	+0·5
γ Piscium	22	23 9 54·42	54·47	−0·05	6	+ 2 31 3·4	4·8	−1·4
ι ,,	18	23 32 45·00	45·13	−0·13	13	+ 4 52 3·7	3·9	−0·2
ω ,,	11	23 52 7·34	7·46	−0·12	6	+ 6 5 16·1	17·9	−1·8